

Causes of Death Among HIV/AIDS Patients in New Jersey: 1990-98

By


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✚ The 1990-98 New Jersey mortality files were matched probabilistically to New Jersey's HIV/AIDS Registry (HARS) using AUTOMATCH to study causes of death among HIV/AIDS patients.

✚ The match used names, dates of birth, death and other identifiers to link HARS records to the 1990-98 mortality files.

✚ 19,395 HARS records were linked to the 1990-98 mortality files. The link supplied the underlying cause of death from the mortality files for HIV/AIDS patients who are known to have died. A by product of the match is the identification of new cases not previously in HARS.



Deaths due to HIV/AIDS (ICD9 codes 042-044) in the 1990-98 mortality files increased steadily from over 1,600 in 1990 to 2,543 in 1995 and decreased sharply thereafter to 758 in 1998. (Figure 1)

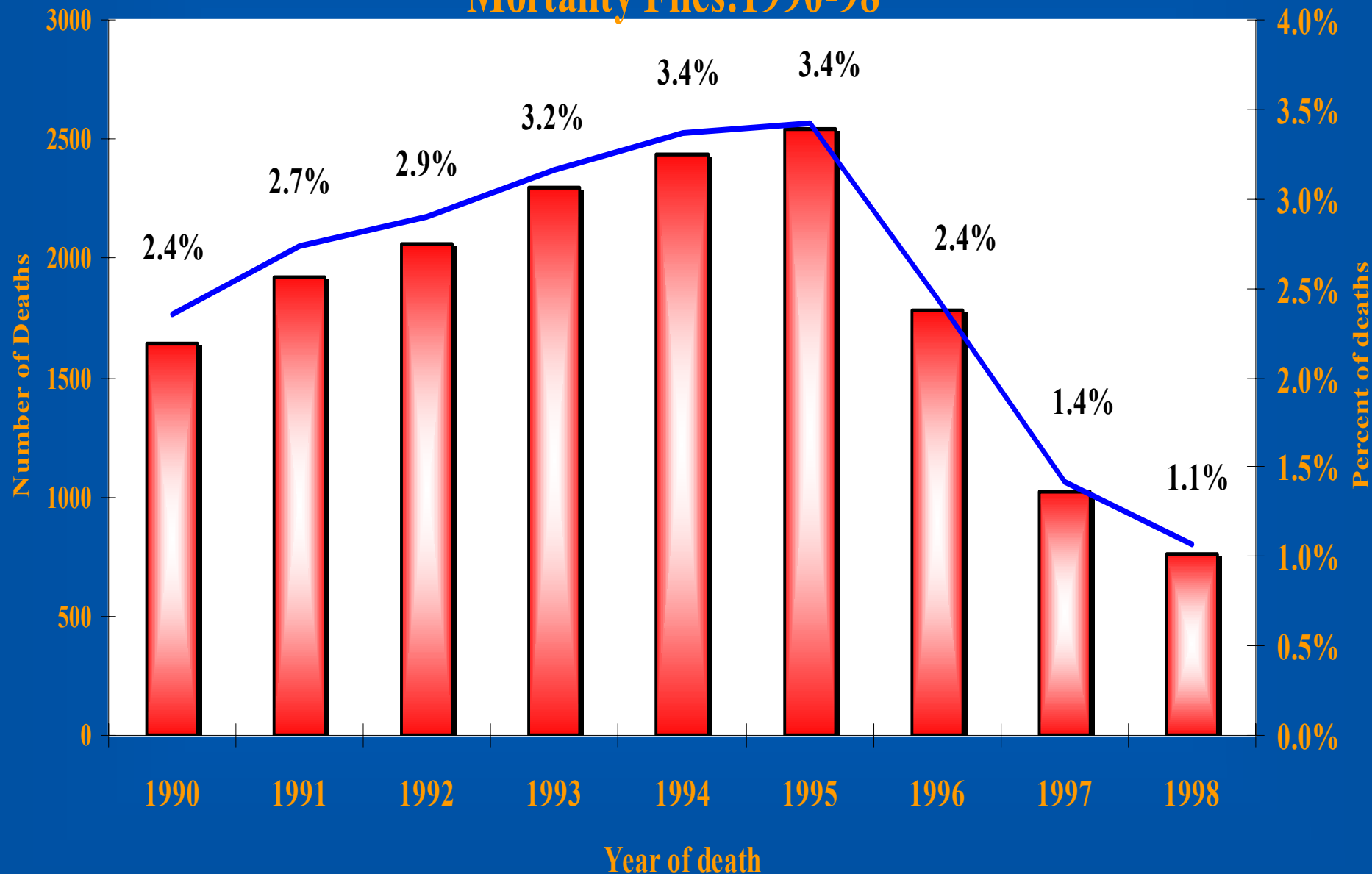



In 1990 deaths due to HIV/AIDS amounted to 2.4% of all deaths in New Jersey, peaking at 3.4% in 1995 and then declining to only 1.1% of all deaths in 1998. (Figure 1)




This steep decline in HIV/AIDS mortality may be attributed largely to advances in treatment and especially use of Highly Active Anti-Retroviral Therapy (HAART).

**Figure 1. Deaths due to HIV/AIDS Infection in New Jersey's
Mortality Files:1990-98**



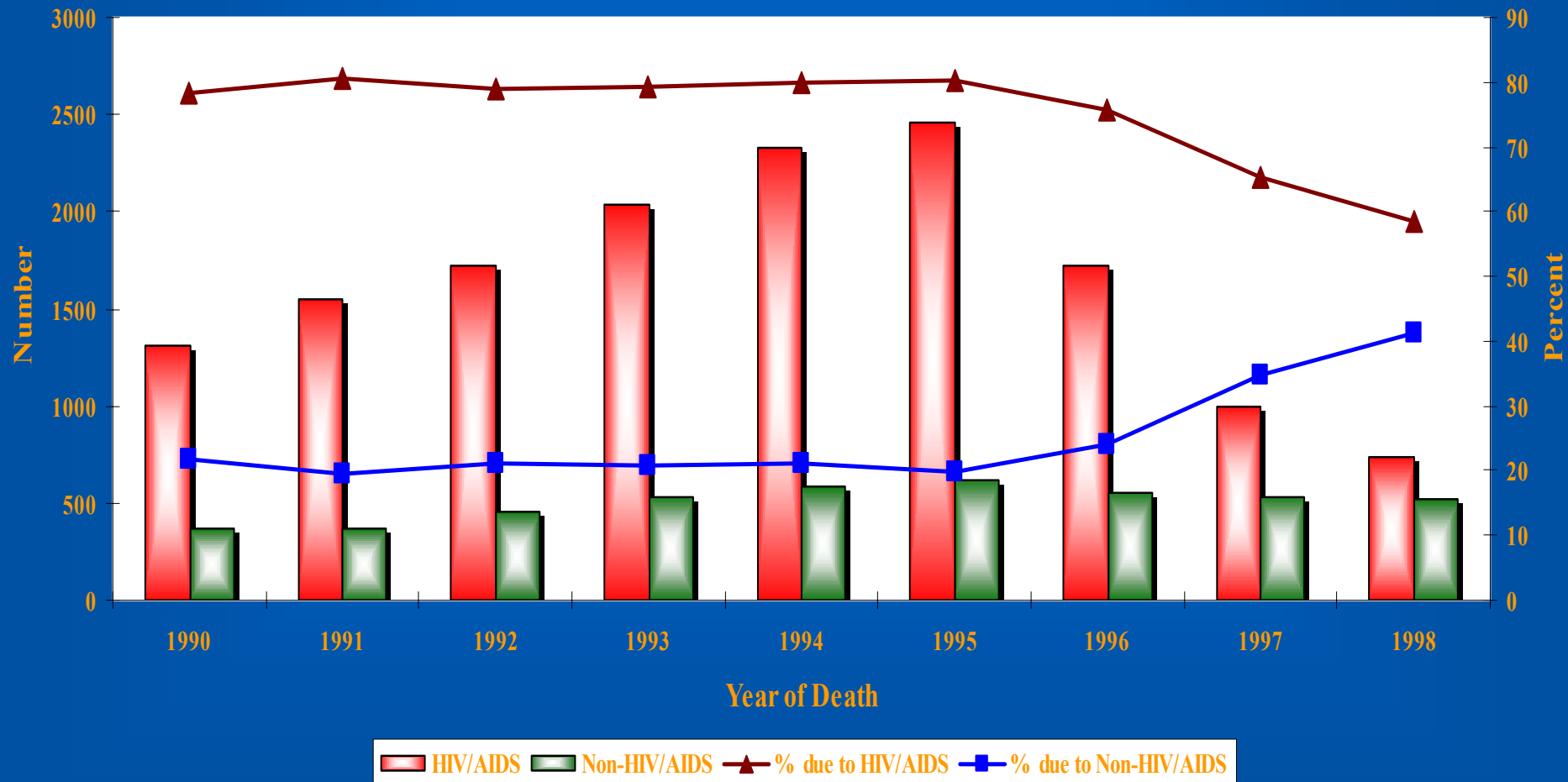



Proportionate mortality due to HIV/AIDS among HIV/AIDS patients who have died declined from a high of around 80% in 1990-95 to less than 60% in 1998. The steepest decline occurred in 1997 and 1998. Between 1997 and 1998 the decline amounted to 10 percentage points. (Figure 2)




As the overall survival among HIV/AIDS patients increased especially after 1995, proportionate mortality due to causes of death other than HIV/AIDS increased more than twofold between 1995 and 1998, from 19.9% to 41.4%. (Figure 2)

Figure 2. Deaths Due to HIV/AIDS Infection and Non-HIV/AIDS Causes Among New Jersey HIV/AIDS Patients: 1990-98





The decline in proportionate HIV/AIDS mortality, however, was not uniform among HIV/AIDS patients across ethnic groups. The decline was steeper for Non-Hispanic Whites and Hispanics than for Blacks despite the fact that Hispanics experienced the highest proportionate HIV/AIDS mortality prior to 1996. (Figure 3)



Proportionate mortality due to HIV/ AIDS declined for both male and female HIV/AIDS patients. By 1998 HIV/AIDS proportionate mortality was 56% among females and 60% among males. (Figure 4).

**Figure 3. Proportionate Mortality due to HIV/AIDS Among
HIV/AIDS Patients by Ethnicity, New Jersey 1990-98**

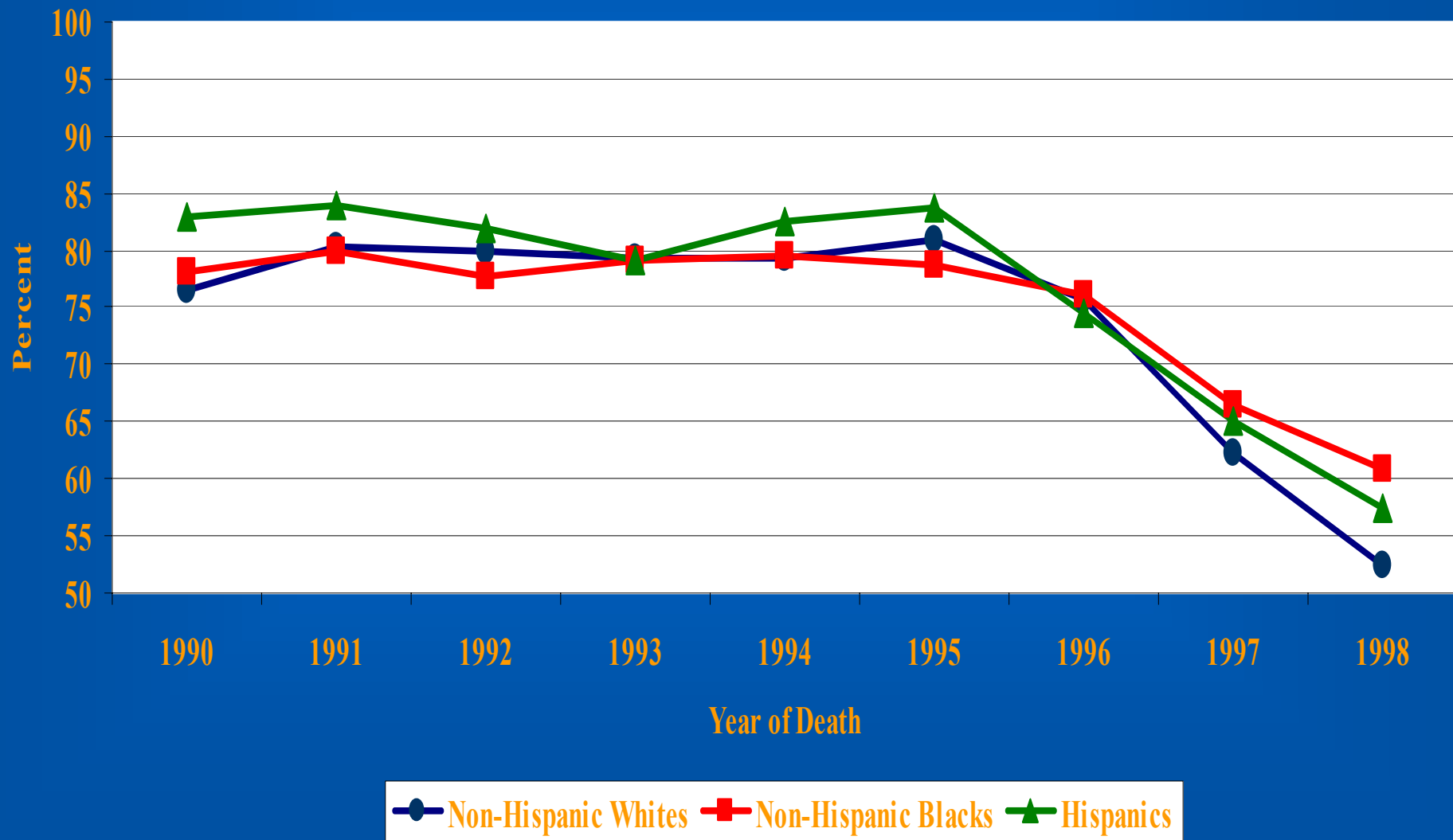


Figure 4. Proportionate Mortality due to HIV/AIDS Among
HIV/AIDS Patients by Gender, New Jersey 1990-98

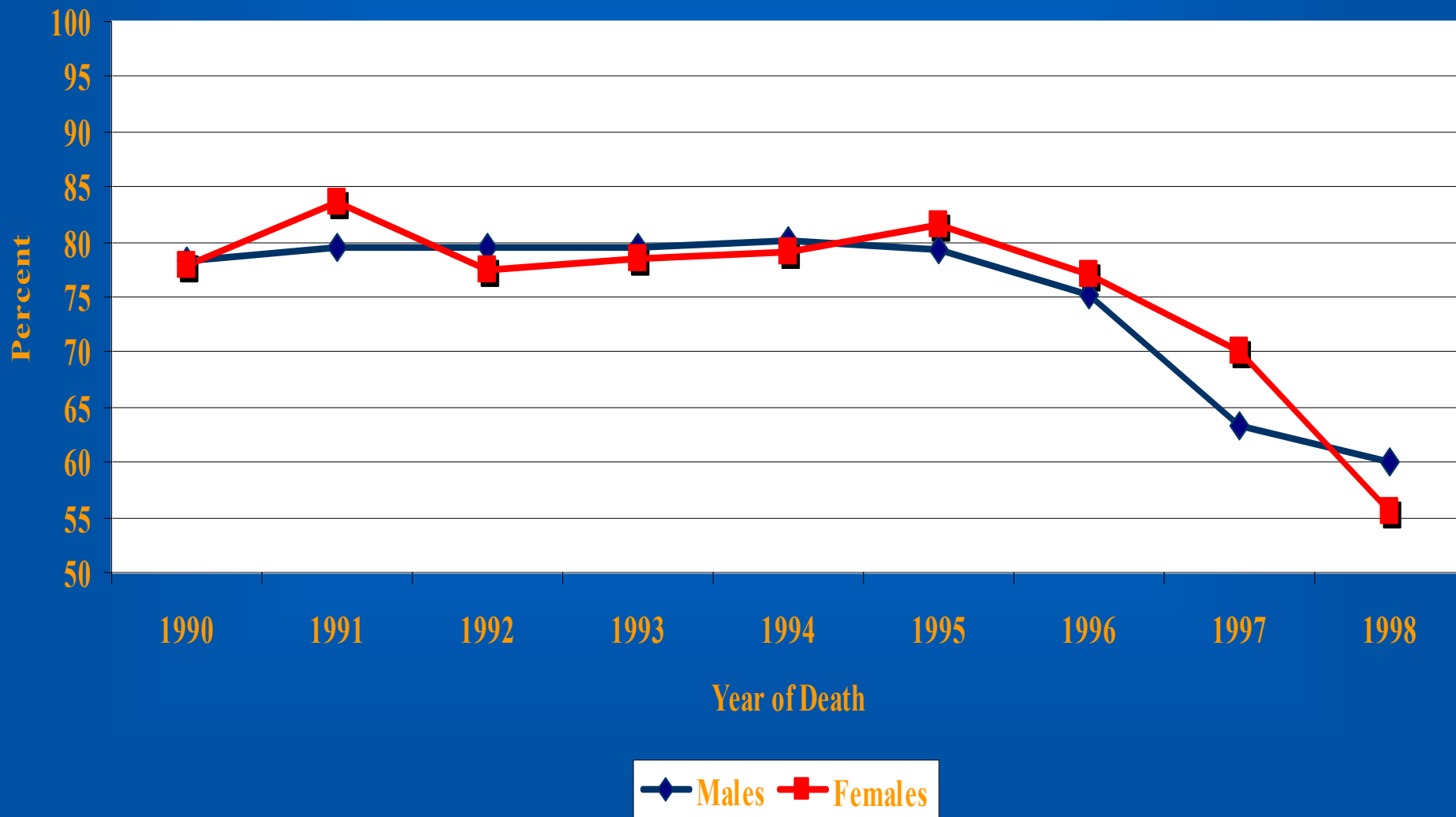




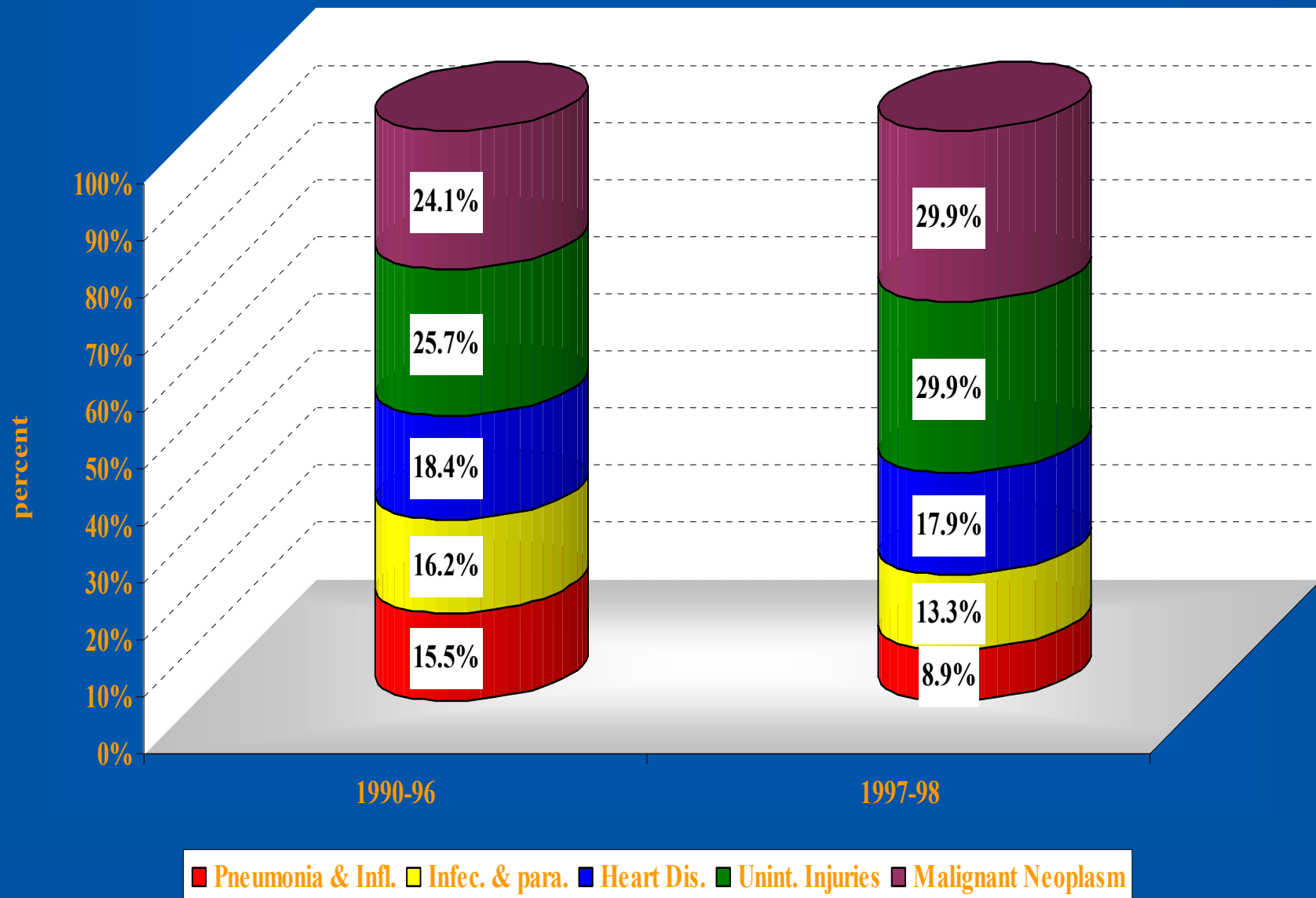
Table 1 compares the rankings of Non-HIV/AIDS causes of death among HIV/AIDS patients in 1990 and 1998. The top five Non-HIV/AIDS causes of death remained the same. The ranking among the top 5, however, changed between 1990 and 1998. In 1990 Other Infectious and Parasitic Diseases and Pneumonia and Influenza ranked first and second, respectively. In 1998 Malignant Neoplasm and Other Unintentional Injuries and Poisoning ranked first and second, respectively. Symptoms, Signs & Ill-Defined Conditions which ranked 18th in 1990, climbed to the 5th place in 1998, tied with Pneumonia and Influenza.

Table 1. Ranks of Causes of Death other than HIV/AIDS among HIV/AIDS Patients in 1990 and 1998		
	Rank in	
Cause of Death	1990	1998
Malignant Neoplasm (140-208)	4	1
Other Unintentional Injures and Poisoning (E800-E807, E826-949)	3	2
Diseases of the Heart (390-398,402,404-429)	5	3
Other Infectious/Parasitic Diseases (001-009,020-037,039-041,045-088,098-139)	1	4
Pneumonia & Influenza (480-487)	2	5.5
Symptoms, Signs & Ill-Defined Conditions (780-799)	18	5.5
Chronic Liver Disease & Cirrhosis (571)	6	7
Nephritis & Nephrosis (580-589)	10.5	8
Motor Vehicle Fatalities (E810-E825)	14.25	9
Cerebrovascular Diseases (430-438)	10.5	10.5
Homicide & Legal Intervention (E960-E978)	8	10.5
Septicemia (038)	7	12
Residuals not included		

■ Among the top five Non-HIV/AIDS causes of death the percent share of Malignant Neoplasm and Other Unintentional Injuries increased in 1997-98 compared to 1990-96, while the percent share of Pneumonia and Influenza and Other Infectious and Parasitic Diseases decreased between those two time periods (Figure 5).

■ Pneumonia and Influenza and Other Infectious and Parasitic Diseases, while decreased, still affect HIV/AIDS patients disproportionately compared to the general population.

**Figure 5. Percent Share Among the Top 5 Non-HIV/AIDS Causes of Death:
1990-96 Vs 1997-98**



Despite the decreasing share of Pneumonia & Influenza and Other Infectious/Parasitic Diseases in 1998, they are still among the top five Non-HIV/AIDS causes of death for 25-44 year old HIV/AIDS patients. By contrast they are not among the top five causes for those 25-44 years old in the general population

The data suggest that HIV/AIDS patient deaths account for over half of the Pneumonia/Influenza deaths and over 25% of Other Infectious/Parasitic disease deaths among 25-44 year olds in New Jersey. This is in addition to the fact that HIV/AIDS infection is the 3rd highest direct cause of death in this age group.

Conclusions

- Linking HARS to mortality files is useful in studying causes of death among HIV/AIDS patients. The match also identifies new HIV/AIDS cases not previously in HARS.
- Mortality due to HIV/AIDS decreased sharply in 1997 & 1998 and may be attributed to advancement in HIV/AIDS treatment.
- As survival of HIV/AIDS patients improved, the proportion of non-HIV/AIDS causes of death (especially cancers & injuries) increased.
- Pneumonia/Influenza and Other Infectious/Parasitic diseases, while decreased still do affect HIV/AIDS patients disproportionately compared to the general population.